BEDES Commercial & Residential Sub-Group (C1/R1)
Second Conference Call—February 11, 2014 (1:00-2:15)

Convener: Rick Diamond, LBNL
Facilitator: Dr. Jonathan Raab, Raab Associates, Ltd.
(See accompanying spreadsheet on website)

Draft Meeting Summary

Approximately 20 people participated in the conference call (including LBNL staff), see Attachment 1.

1:00 Welcome, Introductions, and Today's Agenda/Goals—Dr. Raab

- LBNL team has gone through mapping fields from relevant key specifications with the ones in the BEDES beta. In the process, it identified fields as "Yes" (for fields where LBNL found differences between BEDES beta and key specs, as "No" (for fields where LBNL found no differences between BEDES beta and key specs) and as "Discuss" (for issues or fields it wished to discuss with the Sub-Groups.
    - Emissions Factors and On-Site Generation were the two fields flagged by LBNL for discussion with Sub-Groups
- LBNL staff and Dr. Raab noted that it is still looking to find the best way to identify fields that need discussion within the subgroup; In the first meeting, we discussed everything where there was a discrepancy between BEDES beta and one or more key spec; this time we were much more discerning. Need feedback from the group about what is is the right approach.
- For these set of fields, there was no difference between Commercial and Residential, so Sub-Groups were combined into one conference call

1:10 Administration, Personal Identifier Information, and Energy Fields in BEDES

- Energy Use Worksheet
    - Emissions Factors (line 100) in Energy Use Group
        - Discussion Questions
            - Does the default factor (kg Co2e/Mbtu) enough? Would it be better to specify emission factor units separately- e.g., (kg Co2/Mbtu), (kg CH4/Mbtu), (kg No2/Mbtu)?
            - Do we need to allow users to enter their GHG factors other than the standard factors provided by EPA?
        - Discussion (points made by participants)

- Leave the aggregate equivalent CO2 number. Add additional fields to capture more granular GHG information like kg Co2/Mbtu), (kg CH4/Mbtu), (kg No2/Mbtu)
- Should also be able to enter in other emissions (particulates, SOx..) that are not listed
- Need to provide description as to how the parameters are defined, so that the user will know how to enter GHG information
- Users who want to enter their own factors/numbers should also specify the calculation methodology to ensure consistency

        - Resolution
            - Keep kg CO2e/Mbtu field. However, also provide fields for the GHG gases breakout that makeup the CO2 Equivalent. This will be done through additional defined fields/enumerations (CO, CO2, CH4, N2O, PM) and also letting user chose other relevant information for their application.
            - BEDES needs to provide the user with the flexibility to specify their emission factors other than the standard default values provided by EPA. Also BEDES needs to flag this information when the factors are user entered and not EPA defaults.
    - Additional Fields under Energy Use?
        - Interval type field: Separate this field into two separate sub-fields-one that captures interval frequency (10, 15, 30), and the other interval type (sec, min, hour, day, month..) to address a range of combinations.
        - Fuel: Need to add water as one of the utilities under the "Fuel" and make appropriate changes throughout the spec.
        - Need more fields to explicitly provide details about the billing energy company, particularly if they are different from the distribution utility.
        - Metering Configuration: Need to separate a virtual, aggregate meter from a physical meter. Need to add another enumerated type to capture this distinction –"building aggregated direct metering." That information is also being captured in Energy Use-Add to Total Energy Use. LBNL will identify a way to incorporate this into BEDES and report back.
    - There were no other Sub-Group suggestions for this worksheet.

- Energy Generation & Storage Worksheet
    - On-Site Generation (line 27) in Energy Generation Group
        - Discussion Questions
            - One of the key specification reviewed – Integrated Energy Project (IEP)- gets into lot of detail about a PV system. For example IEP captures component level efficiencies that affect the overall performance of a PV system like AcWiringEfficiency, DcWiringEfficiency, DiodesAndConnectionsEfficiency, InverterTransformerEfficiency. What fields are necessary to characterize PV?

        - Do we need the added level of detail to characterize a PV system or other systems?
    - Discussion and Resolution
        - The group felt that the added level of detail would be helpful for PV system and in general for all other systems as this level of detail might help diagnose the issues related to the performance of an overall system.
        - Capture more granular information when and where available; while providing the option to make some of these optional fields (by users), which can be identified at the implementation level.
    - There were no other proposed additional fields or Sub-Group suggestions for this worksheet.
- Site, Commercial, Residential, and Measures Worksheets
    - There were no issues flagged for discussion on these worksheets
    - There were no other proposed additional fields or Sub-Group suggestions for these worksheets.

Attachment 1: Participation in Sub-Group call

Name	Company
Jayson Antonoff	IMT
Marshall Duer-Balkind	District Department of the Environment, Government of the District of Columbia
Jon Keck	Bright Power, Inc.
Lindsay Robbins	NYSERDA
Jessie Knapstein	DOE
Adam Wallen	Skyfoundry
Steve Kismohr	Midwest Energy Efficiency Alliance
Jonathan Raab	Raab Associates
Steven Abercrombie	Innovate Washington Smart Buildings Center
Jeff Barnes	San Diego Gas & Electric Co
Alex Chou	IBM
Elena Alschuler	DOE
Daniel Studer	NREL
Bob Hendron	NREL
Alexi Miller	New Buildings Institute
Marc Costa	The Energy Coalition
Rick Diamond	LBNL
Julie Caracino	National Home Performance Council